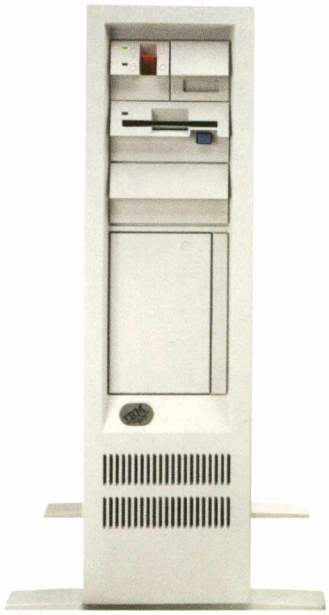
IBM Personal System/2 Model 80 386

The most powerful floorstanding model—with plenty of room to grow

The most powerful floorstanding model in the IBM Personal System/2® family, Model 80 386 is ideal as a LAN server in a large information network or as a stand-alone workstation. With its seven available expansion slots and multiple bays, this PS/2® can support up to 1.28Gb of fixed disk storage and a wide range of available peripherals—giving you the flexibility and expandability you need today and tomorrow. And its 80386™ microprocessor and large expandable memory make the Model 80 perfect for business, engineering/scientific, publishing and other advanced computing environments.

Micro Channel™ architecture ensures balanced performance from the Model 80's high-speed processor and 80-nanosecond memory. As a result, this machine works powerfully and smoothly today—and well into the future. In fact, four new models include an ANSI-standard Small Computer System Interface (SCSI) that lets you expand them with high-performance IBM 60Mb, 120Mb and extremely fast 320Mb fixed disk drives.[1] Just as important, the SCSI interface allows you to add many more peripherals easily—up to seven devices on a single SCSI adapter. It all adds up to a system that will grow as your business grows—and deliver the kind of balanced performance and expandability you've been looking for.



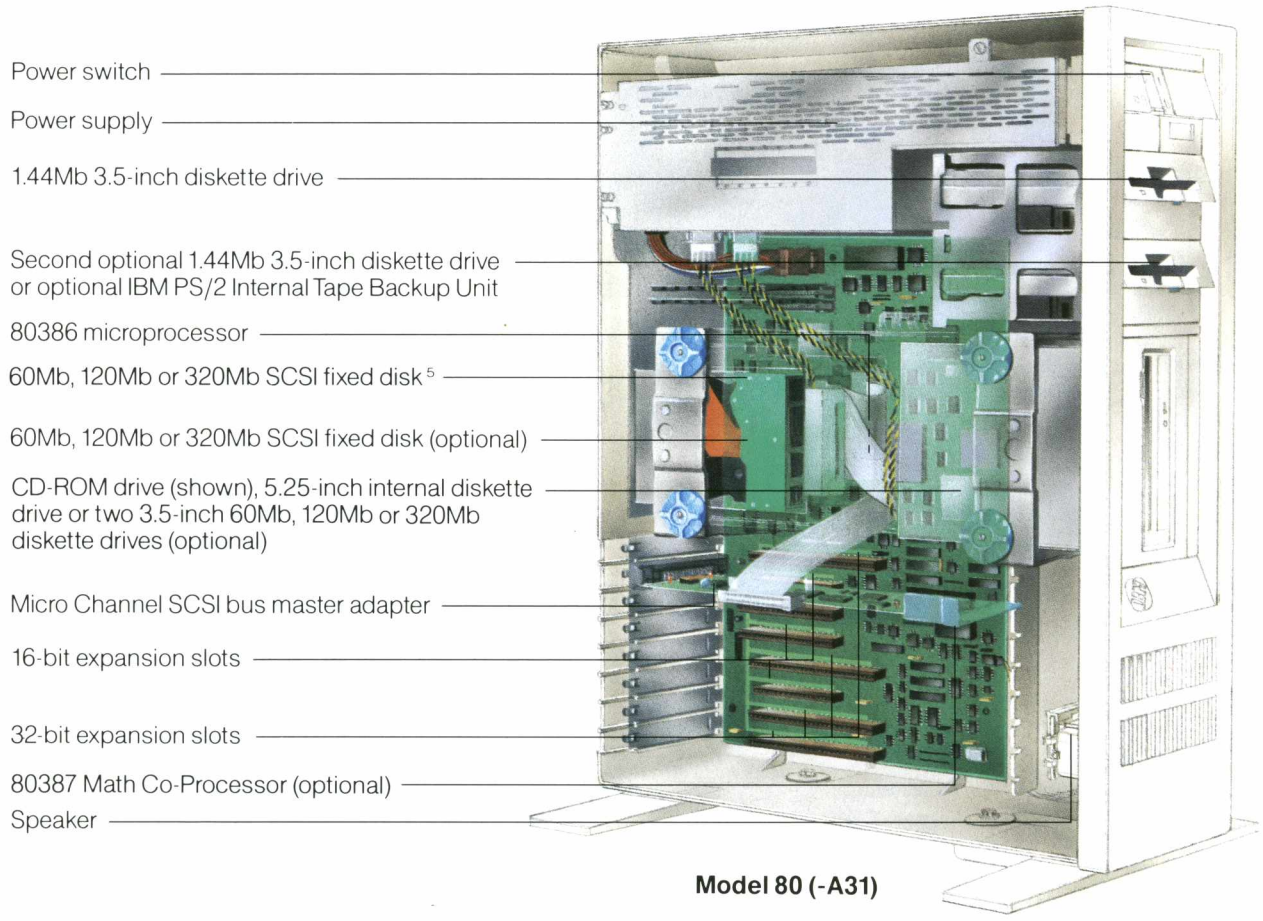
Model 80 at work

Here are some of the ways you can put Model 80 to work for you:

- Use it as an ideal network server
- Benefit from reliable, fast access when Model 80 acts as your LAN gateway to a host
- Process large engineering or scientific models with ease
- Support several applications at once in a multitasking/multiuser environment
- Handle with confidence large desktop publishing jobs or memory-intensive graphics applications
- Take advantage of the 80's built-in SCSI card to connect up to seven peripherals from IBM and OEM vendors; add on as many as three SCSI cards to attach up to 28 devices

IBM

Feature	Benefit
Intel 80386 microprocessor	• Handles data 32 bits at a time to help process large jobs quickly
64Kb memory cache (-A21 and -A31)	• Improves overall performance by making frequently used data accessible to the processor with zero wait states
1Mb, 2Mb or 4Mb user memory (expandable to 16Mb)	• Gives you plenty of speed and workspace • Lets you run multiple applications and work with large amounts of data, making it ideal for OS/2® and AIX™ applications
Micro Channel architecture	• Provides efficient data paths for fast, reliable, balanced performance • Supports multiple tasks and concurrent input/output operations • Protects investment by providing a platform for future expansion and growth
Network and host emulation capabilities	• Make it possible to communicate with your host via many different protocols • Share network peripherals, files and programs with ease
Built-in SCSI bus master Micro Channel adapter cards[2]	• Let you add up to seven different internal or external peripherals[3] • Allow you to interface with IBM or non-IBM SCSI devices
Seven available expansion slots	• Provide optimum system expansion
Multiple bays	• Give you the ability to add on such internal devices as CD-ROM, multiple fixed disks, tape drives, and a 5.25-inch internal diskette drive • Let you use up to six bays—including four for 3.5-inch SCSI fixed disk drives—with Option Kit A installed[4]
Internal fixed-disk drives	• Allow you to choose from high-performance 60Mb, 120Mb or 320Mb SCSI fixed disks for maximum storage of 1.28Gb • Give you faster, more convenient access to programs and data • Reduce storage and retrieval time for large data bases and network services • Provide state-of-the-art 12.5ms performance through 320Mb fixed disk drives (optional)[5]
1.44Mb 3.5-inch diskette drive, 3.5-inch diskette	• Allows for high-density storage • Stores data on a smaller, portable, durable diskette
Built-in VGA capabilities	• Provide high-quality, high-detail graphics and text


Power switch
Power supply
1.44Mb 3.5-inch diskette drive
Second optional 1.44Mb 3.5-inch diskette drive or optional IBM PS/2 Internal Tape Backup Unit
80386 microprocessor
60Mb, 120Mb or 320Mb SCSI fixed disk[5]
60Mb, 120Mb or 320Mb SCSI fixed disk (optional)
CD-ROM drive (shown), 5.25-inch internal diskette drive or two 3.5-inch 60Mb, 120Mb or 320Mb diskette drives (optional)
Micro Channel SCSI bus master adapter
16-bit expansion slots
32-bit expansion slots
80387 Math Co-Processor (optional)
Speaker

Model 80 (-A31)

Wide range of options

	Part No.
Co-Processors	
Wizard Adapter[6]	34F3062
Storage Devices	
3.5" 1.44Mb Diskette Drive	6451026
5.25" 1.2Mb Internal Diskette Drive	6451006
5.25" 1.2Mb External Diskette Drive	4869002
5.25" 360Kb External Diskette Drive	4869001
60Mb SCSI Fixed Disk Drive	6451049
120Mb SCSI Fixed Disk Drive	6451050
320Mb SCSI Fixed Disk Drive	6451055
CD-ROM Drive (internal)	6450845
External CD-ROM Drive	3510001
6157 Streaming Tape Drive[7] (60Mb, 150Mb)	6157001/6157002
Internal Tape Backup Unit	30F5279
3363 Optical Disk[7] Drive (-A01,-B01)	63X4131/63X4182
Scanners	
3117, 3118 Scanners[7]	3117010/3118010
3119 PageScanner[7]	94X2410
Connectivity/Communications	
Token-Ring Network Adapter/A	69X8138
Token-Ring Network 16/4 Adapter/A	16F1133
Token-Ring Network Trace and Performance Adapter/A	96X5774
Token-Ring Network Adapter/A—Remote Program Load	25F8887
PC Network Baseband Adapter/A	1501223
PC Network Adapter II/A	1501222
PC Network Adapter II/A—Frequency 2	96X5647
PC Network Adapter II/A—Frequency 3	96X5648
Dual Async Adapter/A	6451013
Multi-Protocol Adapter/A	6451003
Realtime Interface Co-Processor Multiport/2[6]	09F1897/16F1820
X.25 Interface Co-Processor Portmaster Adapter/A[6]	16F1858
3270 Connection	74F3459
300/1200/2400 Internal Modem/A	94X1755
300/1200 Internal Modem/A	6450349
Leased Line Modem	26F1862
System 36/38™ W/S Emulation Adapter/A	69X6279
Display Station Emulation Adapter/A	92X0743
System/370™ Channel Emulation Adapter/A	06F3160
Graphics and Multimedia	
Display Adapter 8514/A[6]	1887972
Audio Capture/Playback Adapter/A	34F2784
Video Capture Adapter/A	34F2785
Other features	
Micro Channel SCSI Adapter	6451005
Micro Channel SCSI Adapter with Cache	6451018
Mouse	6450350

IBM Personal System/2 Model 80 386 at a glance

Machine numbers	8580-A31	8580-A21	8580-321	8580-121
80386 microprocessor	25 MHz 0–2 wait states 64Kb cache	25 MHz 0–2 wait states 64Kb cache	20 MHz 1 wait state	20 MHz 1 wait state
Optional 80387 Math Co-Processor	25 MHz (6450607)	25 MHz (6450607)	20 MHz (6450378)	20 MHz (6450378)
Memory (RAM)				
Standard	4Mb (80ns)	4Mb (80ns)	2Mb (80ns)	2Mb (80ns)
Maximum on system board	8Mb	8Mb	4Mb	4Mb
System maximum	16Mb	16Mb	16Mb	16Mb
Integrated functions	Video Graphics Array (VGA) and display port, serial port, parallel port, pointing device port, keyboard port and diskette controller, clock/calendar, SCSI adapter			
Available expansion slots	Seven—three 32-bit and four 16-bit (Models -321, -121) Seven—four 32-bit and three 16-bit (Models -A31, -A21)			
SCSI bus master adapter	ANSI standard; support for up to seven internal/external devices per adapter; support for up to four SCSI adapters per system, enabling attachment of a total of 28 peripherals			
Storage				
1.44Mb 3.5-inch diskette drives				
Standard	1	1	1	1
Maximum	2	2	2	2
Fixed disk drives (standard)	320Mb	120Mb	320Mb	120Mb
Access time	12.5ms	23ms	12.5ms	23ms
Optional SCSI fixed disk storage	Up to 3 additional 60Mb (23ms), 120Mb (23ms) or 320Mb (12.5ms) internal drives			
Optional storage	A second 1.44Mb diskette drive or IBM Personal System/2 Internal Tape Back-up Unit; IBM 3363 Optical Disk Drive, IBM 6157 Streaming Tape Drives, IBM 5.25" Internal Diskette Drive, CD-ROM Drive (internal), External CD-ROM Drive			
Text/graphics	VGA also supports CGA, EGA and MCGA modes and provides up to 256 colors (from a palette of over 256,000) and 64 shades of gray (monochrome)			
Display modes	All CGA and EGA modes plus: 320 x 200 pels x 256 colors—all points addressable 640 x 480 pels x 16 colors—all points addressable 9 x 16 character box—16 colors (text)			
Supported displays	IBM Personal System/2 Color Displays 8512, 8513, 8514 and 8515; IBM Personal System/2 Monochrome Displays 8503, 8506, 8507 and 8508			
Keyboard	101 keys, including 12 function keys, 3 lighted mode indicators; 6-foot coiled cable			
Supported printers/plotters	IBM Proprinter™[6] family, IBM LaserPrinter and IBM LaserPrinter E, IBM Quietwriter®[6] printers, IBM Pageprinter[6] family, IBM Personal Page Printer II, IBM Quickwriter®[6] Printer, IBM Wheelprinter family, IBM 618X and 737X Color Plotters[6]			
Operating systems	DOS 3.3 or 4.0, IBM Operating System/2,™ OS/2 Standard Edition 1.1 and 1.2, OS/2 Extended Edition 1.1 and 1.2, AIX Personal System/2[8]			
Power supply	242-watt	242-watt	225-watt	225-watt
Data path	32-bit	32-bit	32-bit	32-bit
Size	Approx. 23.5"H x 6.5"W x 19.0"D (597mm x 166mm x 482mm); 45.3 lbs. (20.6 kg)			
Warranty	One-year limited warranty			

IBM Personal System/2 Model 80 386 at a glance

Machine numbers	8580-311	8580-111	8580-071	8580-041
80386 microprocessor	20 MHz 1 wait state	20 MHz 1 wait state	16 MHz 1 wait state	16 MHz 1 wait state
Optional 80387 Math Co-Processor	20 MHz (6450378)	20 MHz (6450378)	16 MHz (6450369)	16 MHz (6450369)
Memory (RAM)				
Standard	2Mb (80ns)	2Mb (80ns)	2Mb (80ns)	1Mb (80ns)
Maximum on system board	4Mb	4Mb	2Mb	2Mb
System maximum	16Mb	16Mb	16Mb	16Mb
Integrated functions	Video Graphics Array (VGA) and display port, serial port, parallel port, pointing device port, keyboard port and diskette controller, clock/calendar, SCSI adapter			
Available expansion slots	Seven—three 32-bit and four 16-bit			
Storage				
1.44Mb 3.5-inch diskette drives				
Standard	1	1	1	1
Maximum	2	2	2	2
Fixed disk drives				
Standard	314Mb (40ms)	115Mb (30ms)	70Mb (28ms)	44Mb (23ms)
Optional	70, 115, 314Mb	70, 115, 314Mb	70, 115, 314Mb	44Mb
Optional SCSI fixed disk storage	60Mb, 120Mb or 320Mb SCSI fixed disk drives with IBM PS/2 SCSI adapter			
Optional storage	A second 1.44Mb diskette drive or IBM Personal System/2 Internal Tape Backup Unit; IBM 3363 Optical Disk Drive, IBM 6157 Streaming Tape Drives, IBM 5.25" External Diskette Drive, CD-ROM Drive (internal), External CD-ROM Drive			
Text/graphics	VGA also supports CGA, EGA and MCGA modes and provides up to 256 colors (from a palette of over 256,000) and 64 shades of gray (monochrome)			
Display modes	All CGA and EGA modes plus: 320 x 200 pels x 256 colors—all points addressable 640 x 480 pels x 16 colors—all points addressable 9 x 16 character box—16 colors (text)			
Supported displays	IBM Personal System/2 Color Displays 8512, 8513, 8514 and 8515; IBM Personal System/2 Monochrome Displays 8503, 8506, 8507 and 8508			
Keyboard	101 keys, including 12 function keys, 3 lighted mode indicators; 6-foot coiled cable			
Supported printers/plotters	IBM Proprinter family, IBM LaserPrinter and LaserPrinter E, IBM Quietwriter printers, IBM Pageprinter family, IBM Personal Page Printer II, IBM Quickwriter Printer, IBM Wheelprinter family, IBM 618X and 737X Color Plotters			
Operating systems	DOS 3.3 or 4.0, IBM Operating System/2, AIX Personal System/2[8]			
Power supply	225-watt worldwide autosensing and autoswitching			
Data path	32-bit	32-bit	32-bit	32-bit
Size	Approx. 23.5"H x 6.5"W x 19.0"D (597mm x 166mm x 482mm); 52 lbs. (23 kg)			
Warranty	One-year limited warranty			

Why PS/2?

Here are some of the reasons why PS/2 stands out as the best solution for your business needs.

Technological leadership through Micro Channel architecture, integrated construction and advanced design (by combining Very Large Scale Integration and Surface Mount Technology), and support for large memory.

Extensive communications capabilities—through a wide range of connectivity options—provide concurrent support for intelligent communications adapters and co-processors, thanks to Micro Channel architecture.

Compatibility to protect your investment since the PS/2s you have today work with existing products and programs and with those you'll need tomorrow.

Service and support that provide you with everything from fast parts delivery to on-site services to system planning to 24-hour phone support—all at a competitive price.

Business Partners who enhance PS/2 capabilities by helping customers choose, customize and configure hardware and software to meet a range of needs.

Quality and reliability that ensure PS/2s are built to perform smoothly and dependably year after year.

Memory matrix tables

Memory on system board	**Model 80-041**	**Model 80-071**
Standard memory	1Mb	2Mb
Maximum memory	2Mb	2Mb
System board memory expansion kits	1Mb (6450375)	N/A
Number of memory kits that can be added on system board	1	0
Memory configurations possible on system board	1Mb, 2Mb	2Mb

Memory options (cards)			
Memory expansion card (size) and capacity range	2–8Mb (6450605)	or 2–14Mb (34F3077)	or 4–14Mb (34F3011)
Memory kits to upgrade card			
1Mb kit	6450603	6450603	6450603
2Mb kit	6450604	6450604	6450604
4Mb kit	N/A	34F2933	34F2933
Maximum number of memory kits that can be added to each memory card	3	3	3
Maximum number of memory cards/system	2	1	1
Maximum system memory	16Mb	16Mb	16Mb

Memory on system board	**Model 80 -111, -121, -311, -321**	**Model 80 -A21, -A31**
Standard memory	2Mb	4Mb
Maximum memory	4Mb	8Mb
System board memory expansion kits	2Mb (6450379)	4Mb (6451060)
Number of memory kits that can be added on system board	1	1
Memory configuration possible on system board	2Mb, 4Mb	4Mb, 8Mb

Memory options (cards)			
Memory expansion card (size) and capacity range	2–8Mb (6450605)	or 2–14Mb (34F3077)	or 4–14Mb (34F3011)
Memory kits to upgrade card			
1Mb kit	6450603	6450603	6450603
2Mb kit	6450604	6450604	6450604
4Mb kit	N/A	34F2933	34F2933
Maximum number of memory kits that can be added to each memory card	3	3	3
Maximum number of memory cards/system	2	1	1
Maximum system memory	16Mb	16Mb	16Mb

Note: A minimum of 2Mb of memory must be installed on the system board when using adapter 34F3077 or 34F3011.

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[1] *Pertains to Models -A21, -A31, -321 and -121; however, a SCSI adapter can be added as an option to the other four models.*
[2] *Standard in Models -A21, -A31, -321 and -121; optional in rest.*
[3] *Installation may require features that are not listed, such as adapters, cables and installation kits.*
[4] *Pertains to Models -A21, -A31, -321 and -121.*
[5] *Models -A21 and -A31 come with a standard 320Mb fixed disk drive and can accommodate three more.*
[6] *Multiple features may be required depending on the specific functions desired.*
[7] *Several models, some with selectable functions, are available; additional features may be required.*
[8] *AIX Personal System/2 Operating System available 6/90.*

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